### **DISPLAY LCM LCD**



#### **LED Series**

L-KLS9-L-5034R1D Red,620-635nm,2000-3000mcd,Diffused,viewing angle: 50-60



## **TECHNOLOGY DATA SHEET & SPECIFICATIONS**

MODEL: L-KLS9-L-5034R1D

#### **Features**

- 'High efficiency
- Low Power consumption
- General purpose leads
- Selected minimum intensities
- 'Available on tape and reel
- 'Pb free

### **Descriptions**

- The series is specially designed for applications requiring higher brightness
- The LED lamps are available with different colors, intensities, epoxy colors, etc
- Superior performance in outdoor environment

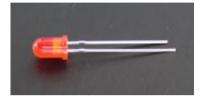
# **Usage Notes:**

Surge will damage the LED

When using LED, it must use a protective resistor in series with DC current about 20mA

## **Applications**

- 'Status indicators
- 'Commercial use
- 'Advertising Signs
- Back lighting







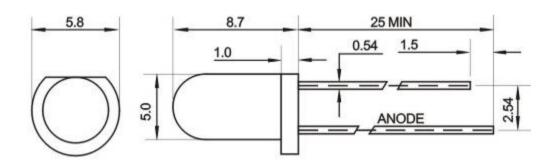
### **LED Series**



### **Device Selection Guide**

LED Part No.	Cł	nip	Lawa Oalan	
	Material	Emitted Color	Lens Color	
5034R1D-ESB-E	AlGalnP	Red	Color Diffused	

# **Package Dimensions**



### UNIT:mm

#### Notes:

Other dimensions are in millimeters, tolerance is 0.25mm except being specified.

'Protruded resin under flange is 1.5mm Max LED.

Bare copper alloy is exposed at tie-bar portion after cutting.



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# Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Test Condition
Luminous Intensity	lv	2000		3000	mcd	IF=20mA(Note1)
Viewing Angle	2θ <sub>1/2</sub>	50		60	Deg	(Note 2)
Peak Emission Wavelength	λр	620		635	nm	IF=20mA
Spectral Line Half-Width	$\triangle \lambda$	15	20	25	nm	IF=20mA
Forward Voltage	V <sub>F</sub>	1.9		2.3	V	IF=20mA
Reverse Current	I <sub>R</sub>			10	μΑ	VR=5V

#### Note:

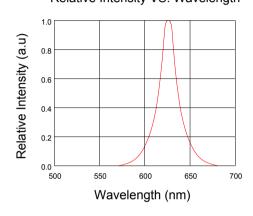
- 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- 2.  $\theta$ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

### **LED Series**

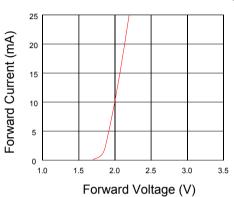


## **Typical Electro-Optical Characteristics Curves**

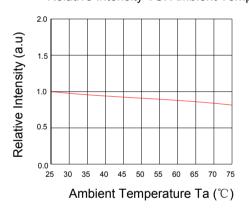
Relative Intensity VS. Wavelength



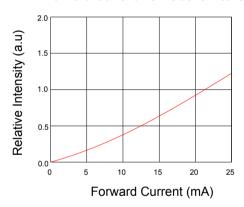
Forward Current VS.Forward Voltage



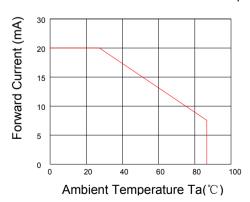
Relative Intensity VS. Ambient Temp



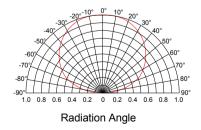
Forward Current VS.Relative Intensity



Forward Current VS.Ambient Temp.



**Radiation Characteristics** 



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#### **LED Series**

#### **Notes**



- 1. Above specification may be changed without notice. HYLED will reserve authority on material change for above specification.
- 2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. HYLED assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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